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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/292,056	04/14/1999	JOEL S. GREENBERGER	PITT-1DIV	3040

7590 09/20/2007  
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PITTSBURGH, PA 15213

EXAMINER
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BEISNER, WILLIAM H

ART UNIT	PAPER NUMBER
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1744

MAIL DATE	DELIVERY MODE
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09/20/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/292,056

Applicant(s)

GREENBERGER ET AL.

Examiner

William H. Beisner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2007 and 05 July 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,47-64,70-81,86-97,99,100 and 103-127 is/are pending in the application.
- 4a) Of the above claim(s) 1,47-64,70-81,86-97,99,100,103-113 and 124-127 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 114-123 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/18/07 and 7/5/07
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group V, Claims 114-123, in the reply filed on 7/5/2007 is acknowledged. The traversal is on the ground(s) that i) the restriction is improper in view of the prosecution history of the instant application and a related patent; ii) the five groups of claims include common language that would require the Examiner to search in the same class and subclass; iii) claim 74 only differs from the other independent claims by including the language "stem cell". This is not found persuasive for the following reasons:

In response to comment i) above, the Examiner is permitted to require a restriction in an application at any stage of the prosecution up to final rejection and can require a restriction in a child application even though the claims were grouped differently in the parent application (See MPEP 811-811.04).

In response to comment ii) above, the fact that the five groups of claims have common language and would require a search that may include common classes and subclasses is immaterial because the Examiner has shown that the groups of claims are distinct and are a burden on the Examiner. Note while the search of the common language may not burden the Examiner, the differences pointed out by the Examiner in the restriction requirement would burden the Examiner and require additional searching, i.e. the search for one group of claims would not be identical for the other groups of claims in view of the differences between the groups of claims. Note a serious search and examination burden exists if restriction were not required because one or more of the following reasons apply: (a) the inventions have acquired a separate status in the art in view of their different classification; (b) the inventions have acquired

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a separate status in the art due to their recognized divergent subject matter; (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries); (d) the prior art applicable to one invention would not likely be applicable to another invention; (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

In response to comment iii) above, the restriction requirement indicated that claim 74 was distinct for reasons other than the presence of a stem cell. If Applicants' comments are accurate, claim 74 would have been grouped with the other independent claim that is identical except for the presence of "a stem cell" and the claim would later be objected to for being a duplicate claim because it is of the same scope as the claim without the "stem cell" language.

With respect to Applicants' comment concerning a petition of the requirement, Applicants are urged to review 37 CFR 1.144. Petition from requirement for restriction. "After a final requirement for restriction, the applicant, in addition to making any reply due on the remainder of the action, may petition the Director to review the requirement. Petition may be deferred until after final action on or allowance of claims to the invention elected, but must be filed not later than appeal. A petition will not be considered if reconsideration of the requirement was not requested (see § 1.181)."

The requirement is still deemed proper and is therefore made FINAL.

### ***Information Disclosure Statement***

2. The information disclosure statements filed 1/18/2007 and 7/5/2007 have been considered and made of record.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 114-123 are rejected under 35 U.S.C. 102(b) as being anticipated by Funakubo et al.(US 5,106,584).

With respect to claim 114, the reference of Funakubo et al. discloses an apparatus that includes a biochamber (tray, 6) having a plurality of cell housing containers (wells) and sealed in a housing (See column 7, lines 38-41). The apparatus includes a liquid handling system (4) that is capable of providing exchange of media to the cells and is in fluid communication with the plurality of cell housing containers (wells). The apparatus includes an image recognition system (24) that is capable of analyzing and/or recognizing the cells in the plurality of cell housing containers. The colony observation section of the reference of Funakubo et al. includes a microscope-equipped TV camera and computer (controller, 25) (See column 8, lines 43-53). The apparatus also includes a stage (7,8) for supporting the biochamber (6) and wherein the liquid handling system (4) and image recognition system (24) are provided in movable registration with respect to one another whereby the liquid handling system and image recognition system can access different cell housing containers (wells). Finally, the apparatus includes a system

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controller (25, 26) that is capable of regulating interaction between the biochamber (6), liquid handling system (4), image recognition system (24) and stage (7,8).

With respect to claim 115, the reference of Funakubo et al. discloses that the image recognition system includes a microscope-equipped TV camera (See column 8, line 44).

With respect to claim 116, the image recognition system is capable of determining cellular characteristics of the cells (See column 8, lines 49-53).

With respect to claim 117, the system controller is capable of actuating the liquid handling system to provide media exchange with the cells (See column 7, lines 15-56).

With respect to claim 118, the liquid handling system is capable of aspirating, irrigating and dispensing media to the cells (See column 7, lines 42-56).

With respect to claim 119, the liquid handling system includes a plurality of pipettes (21).

With respect to claim 120, the stage (7,8) is capable of displacing at least one of the housing containers (wells) with respect to the liquid handling system and image recognition system.

With respect to claim 121, the image recognition system is capable of determining cellular characteristics and the system controller is capable of regulating the biochamber and liquid handling system in response (See column 7, lines 15-56, and column 8, lines 43-53).

With respect to claim 122, the biochamber is capable of being displaceable to both the liquid handling system (4) and image recognition system (24).

With respect to claim 123, the biochamber can be moved in the X and Y directions (See stage (7,8)) and the liquid handling system (4) (See Figure 4) and image recognition system (24) (Microscope focus) can be moved in the Z direction.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 114-123 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 47, 49-51, 57, 59, 63, 64 and 66 of copending Application No. 10/114,892 in view of Funakubo et al.(US 5,106,584)

Claims 47, 49-51, 57, 59, 63, 64 and 66 of U.S. Application 10/114,892 are substantially the same as claims 114-123 of the instant application. Any of the slight differences in structure between the two sets of claims are rendered obvious to one of ordinary skill in the art in view of the disclosure of Funakubo et al. which discloses conventional structures for automating a culture process that includes image analysis.

7. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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8. Claims 114-123 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-31 and 42 of U.S. Patent No. 6,008,010 in view of Funakubo et al.(US 5,106,584)

Claims 13-31 and 42 of U.S. Patent No. 6,008,010 are substantially the same as claims 114-123 of the instant application. Any of the slight differences in structure between the two sets of claims are rendered obvious to one of ordinary skill in the art in view of the disclosure of Funakubo et al. which discloses conventional structures for automating a culture process that includes image analysis.

#### ***Response to Arguments***

9. Applicant's arguments filed 1/18/2007 with respect to claims 114-123 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Beisner whose telephone number is 571-272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:15am to 3:45pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys J. Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Beisner/  
Primary Examiner  
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WHB